



23641

PATENT TRADEMARK OFFICE

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No.: 23641

Application No.: 09/584570

Confirmation
No.: 3873

Filing Date: May 31, 2000

Group Art
Unit: 2863Examiner
Name: Tung S. LauAttorney
Docket No.: 28908/82353First Named
Inventor: Roseberry, David E.Title: PUMP AND METHOD FOR
FACILITATING
MAINTENANCE AND
ADJUSTING OPERATION OF
SAID PUMP

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TECHNOLOGY CENTER

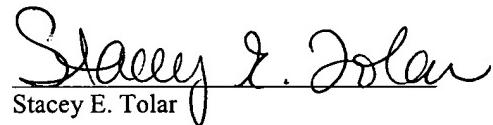
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on June 16, 2003


Stacey E. Tolar

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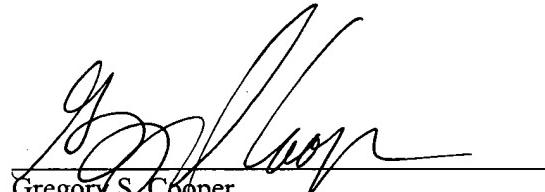
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| <input checked="" type="checkbox"/> After Final | <input type="checkbox"/> Certified Copy of Priority Document(s) |
| <input type="checkbox"/> Affidavits/declaration(s) | <input type="checkbox"/> Response to Missing Parts/Incomplete Application |

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- Petition to Convert to a Provisional Application
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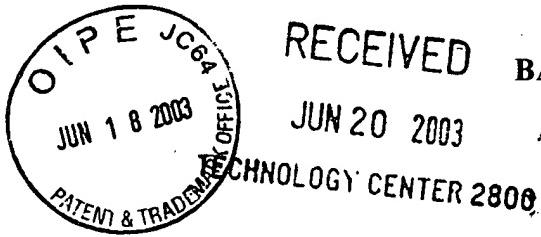
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on June 16, 2003
Stacey E. TolarAMENDMENT

Mail Stop AF
Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Official Action mailed April 21, 2003, in connection with the above-identified application, reconsideration and allowance of the claims is respectfully requested for the reasons expressed herein below.



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As a preliminary matter, Applicants wish to acknowledge with appreciation the Examiner's analysis and efforts in examining this application. The Official Action of April 21, 2003, has been thoroughly studied. Accordingly, the claims as they stand are believed to be sufficient to place the application into condition for allowance.

On pages 2 through 4 of the Official Action, the Examiner indicated that Claims 1-4, 6-12, 14-28, 30-35, 37-39, 47, 48, 50, 51 and 53 are rejected under 35 U.S.C. § 103(a) as being obvious under Miller (U.S. Patent 5,563,351) in view of Garrett, et al. (U.S. Patent 4,951,271). The Examiner alleges that Miller discloses a method and apparatus of facilitating maintenance of a pump. The Examiner acknowledges, however, that Miller does not disclose an acoustical sensor communicating operational data reflective of the sensed operating condition to the processor. Garrett, according to the Examiner, discloses such an acoustical sensor communicating operational data reflective of the sensed operating condition to the processor (citing col. 2, lines 19-48), and the signal being vibratory (citing col. 2, lines 19-22), in order to have a low cost, very simple construction and highly sensitive system (citing col. 1, lines 9-20, col. 2, lines 19-22).

It would, thus, have been obvious to one of ordinary skill in the art at the time the invention was made, according to the Examiner, to modify Miller to include the acoustical sensor (vibratory signal) of Garrett, to communicate operational data reflective of the sensed operating condition to the processor. This, according to the Examiner, would produce a low cost, simply constructed high sensitive system (citing col. 1, lines 9-20, col. 2, lines 19-22).

It is respectfully submitted that the combined teachings of Miller and Garrett, et al. to find the presently claimed invention obvious could only be accomplished through hindsight reconstruction. Specifically, the present obviousness rejection is improperly based on reconstructing the prior art into the claimed invention by using the claimed invention as a blueprint. *In re Rouffet*, 149 F.3d 1350, 1357-58, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Applicants, thus, respectfully traverse this rejection as impermissible hindsight reconstruction and respectfully request reconsideration and allowance of the claims at issue.



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To establish a *prima facie* case of obviousness, as is the case with this present rejection, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references, or to combine the references' teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

Specifically regarding motivation and likelihood of success, hindsight reconstruction cannot be used to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention. *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). *Panduit Corp. v. Dennison Manufacturing Co.*, 227 USPQ2d 337, 343 (CAFC 1985). *In re Shuman*, 150 USPQ 54, 57 (CCPA 1966). Motivation and likelihood of success must, therefore, exist in the prior art references themselves, and not in the presently claimed invention.

The Examiner's rejection is based on the belief that the hydrophone disclosed in Garrett, and the pump and flow meter system disclosed in Miller teach the claimed invention. There is no motivation in Miller, however, to configure the hydrophone of Garrett to replace the flow meter of Miller. Nor is there any indication that there would be success in making such a combination. Furthermore, no indication in Miller exists as to what extent reconstruction is required to install a hydrophone, and its attendant support equipment, into the pump.

Though Garrett discloses a hydrophone, it does not disclose any uses for it. Specifically, there is no teaching whether a hydrophone will or will not even work as a substitute for a flow meter or the like. The reference is silent as to any potential application, particularly related to pumps or similar devices. There is certainly no teaching that the acoustical data received by the hydrophone can be used to sense the operating condition of a pump, contrary to



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the Examiner's allegation. The only such motivation to combine Miller and Garrett that can be found in the record is in the specification and claims of the present invention. Such a motivation to combine, however, is clearly improper hindsight reconstruction.

Applicants are aware that, "[a]ny judgement on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). The instant application is not believed to be such a case, however. There is no teaching from either reference that one skilled in the art of pumps would combine a pump with a hydrophone. Despite, several searches conducted by the Examiner, no better prior art was found than a hydrophone and a pump. Neither of these references, however, provide any motivation to combine each other to disclose the present claims. Thus, the only knowledge existing that would motivate one skilled in the art comes from the Applicants' disclosure.

With respect to the Examiner's stated motivations to combine Miller and Garrett, it is alleged that the hydrophone of Garrett, et al. is "low cost" and has "very high sensitivity." The Examiner alleges that, one skilled in the art, with nothing more, would be motivated to add the hydrophone of Garrett to the pumps of Miller to get the Applicants' claimed invention.

It is respectfully submitted that "low cost" is merely an unsupportable and vague conclusion rather than an argument. No benchmark exists in either reference to serve as a basis with which to make a comparison of expense between the various sensors. There is no teaching that indicates the sensors in Miller are more expensive than the sensor disclosed in Garrett. No such financial considerations are even identified in Miller by the Examiner. In fact, the only apparent reference to cost in Garrett, et al. is that prior art hydrophones are of "high cost." (See column 1, line 12.) This comparison, however, is between old generation and new generation hydrophones, not between hydrophones and other types of sensors, like flow meters, for



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example. That comparison is, thus, irrelevant with respect to the Examiner's stated "low cost" argument.

Because of the inherently relative and subjective nature of financial considerations, and because no such information even exists in any of the references, it is respectfully believed that such cannot even rise to the level of a motivating factor in this case.

Furthermore, it is notable that Garrett, et al. does not describe applications or uses with which it is best suited. Rather, Garrett, et al. only describes the structural and functional detail of an omni-directional hydrophone. There is no teaching in Garrett, et al. as to how one skilled in the art of pumps could adapt the hydrophone for use in a pump. Furthermore, no argument has been set forth by the Examiner as to how and to what extent the pump in Miller would have to be modified in order to accommodate the sensor of Garrett, et al.

It is, thus, respectfully asserted that the subject matter of the rejected claims is not obvious under Miller in view of Garrett. It is respectfully requested that the rejection, therefore, be withdrawn.

It is believed that the above represents a complete response to the Official Action and favorable reconsideration by the Examiner is requested. The proposed amendments do not raise new issues that would require further consideration and/or search, do not raise the issue of new matter, do not increase the number of claims in the application, and are deemed to place the application in better form for either allowance or appeal by reducing or simplifying the issues for appeal.

If, upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact Applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. To the extent additional fees are required, please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 02-1010 (28908/82353) and please credit any excess fees to such deposit account.

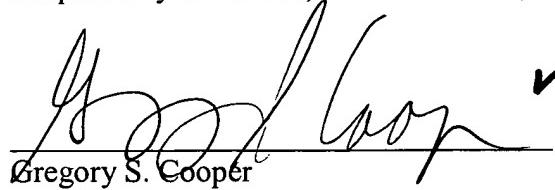


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Respectfully submitted,


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